



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/525,458

09/28/2005

Kazuo Kubota

0425-1178PUS1

3849

2292 7590 03/12/2009  
BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

03/12/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<p align="center"><b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b></p>	<p><b>Application No.</b> 10/525,458</p>	<p><b>Applicant(s)</b> KUBOTA ET AL.</p>	
	<p><b>Examiner</b> DENNIS CORDRAY</p>	<p><b>Art Unit</b> 1791</p>	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 24 February 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): Claims 1, 7-10, 13, 14 and 18 under 35 U.S.C> 112, 2<sup>nd</sup> par..  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1,7-10,13 and 14.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_.

/Eric Hug/  
Primary Examiner, Art Unit 1791

/Dennis Cordray/  
Examiner, Art Unit 1791

Continuation of 11. The amendments overcome the indefiniteness rejections raised in the previous Final Office Action. Since the corrections were already assumed or considered and serve to reduce the potential issues for appeal by the cancellation of Claim 18, the amendments are entered.

The amended claims remain rejected over the cited prior art for the reasons given in the previous Office Action.

Applicant's arguments have been fully considered but are not persuasive.

Applicant argues that Niinikoski does not disclose the suspension polymerization, emulsion polymerization or dispersion polymerization, but a precipitation polymerization. Applicant further argues that Niinikoski teaches polymerization using a hydrophobic monomer and not a water soluble monomer. Applicant also argues that the pulp sheet obtained is not the same as that claimed. Applicant argues that the claimed starch and polymer particles do not bond together as do those of Niinikoski.

While Niinikoski discloses a preferred embodiment of using at least one hydrophobic monomer along with others, disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." In re Gurley, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994) Furthermore, "[t]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Niinikoski discloses preparation of a dispersion by copolymerizing at least one vinyl monomer, which can be vinyl acetate, in an aqueous solution of a starch. Since a dispersion is obtained, the polymerization must at least in part be dispersion polymerization. The discussion regarding precipitation polymerization pertains to a first polymerization step in a preferred embodiment wherein hydrophobic monomers and/or acrylonitrile are bound onto dissolved starch molecules and the chains try to detach from the water phase and are precipitated into initial particles. In the second polymerization step, polymerization occurs on the formed particles, as in a dispersion polymerization (col 4, lines 45-55).

Alternatively, the instant claims use a vinyl acetate monomer, which is the same as the vinyl acetate monomer disclosed by Niinikoski, thus a water soluble monomer is disclosed in some embodiments. The instant claims recite a vinyl acetate polymer made in the presence of a starch by a specified method, thus are product-by-process claims. The product of Niinikoski appears to be the same as or similar to the claimed product, a vinyl acetate polymer is made in the presence of a starch produced by a similar process. The burden therefore shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). "In the event any differences can be shown for the product of the product-by-process claims as opposed to the product taught by the Niinikoski, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results: see also In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)" A similar discussion regarding the pulp sheet containing the vinyl acetate polymer and starch is presented in the Final Office Action.

In a third alternative, Applicant admits that Niinikoski discloses that a small amount of homopolymer is obtained, which reads on the interpretation of the claims as argued by Applicant. However, the open language of instant claims does not preclude additional polymers other than homopolymers or specify any particular amount of homopolymer. Furthermore, the claims do not prohibit formation of a polymer bonded to the starch, but recite that 94.66 wt-% to 100 wt-% of the vinyl monomer derived structural units are vinyl acetate units. The basic structural units of starch are not vinyl monomer derived units and do not fall under the recited limitations of the claim.

Regarding the use of a surfactant, surfactants are not claimed or precluded by the instant claims and are not discussed in the previous Final Office Action. The referenced lines, col 1, line 66 to col 2, line 12, appear to relate to using degraded starch with an emulsifier or water soluble monomer, rather than using the same or a chemically similar starch to the sizing agent. It is the use of enzymatically degraded starches that results in drastically impaired strength properties of paper (col 2, lines 43-48), not the use of water soluble monomers.

Regarding bonding of the starch to the polymer, Applicant is arguing features not claimed.